ABSTRACT OF THE DISCLOSURE

Magnet wires wound in slots in a lamination stack of a dynamoelectric machine are encapsulated, in whole or in part, with plastic. The plastic may be thermally conductive and have features molded therein that enhance heat transfer. The plastic may stiffen the armature and increase its critical speed. Characteristics of the plastic, its geometry and its distribution may be varied to adjust spinning inertia and resonant frequency of the armature. The magnet wires may be compressed into the slots, by application of iso-static pressure or by the pressure of the plastic being molded around them. Larger magnet wire can then be used which increases the power of the electric motor using the armature having the larger magnet wire. A two or three plate mold may be used to mold the plastic around the armature. Balancing features can be molded in place. The plastic can have a base polymer that is a blend of two or more polymers and various thermally conductive fillings.